

PHDRE040102

CLAIMS:

1. Lighting device comprising a lamp (1) comprising a burner (10) with an ionizable filling and an amount of mercury contained therein, having at least one mercury absorbing/adsorbing and/or blocking means (40;70) located outside the burner (10) for the fixation of mercury in case of an explosion of the burner (10).
- 5 2. Lighting device according to claim 1, comprising a mercury blocking means.
3. Lighting device according to claim 1 or 2, wherein the mercury blocking
10 means is a filter means.
4. Lighting device according to any of the claims 1 to 3, wherein the mercury blocking means is a filter comprising glass fibres, preferably a HEPA-filter.
- 15 5. Lighting device according to any of the claims 1 to 4, comprising a mercury absorbing/adsorbing means.
6. Lighting device according to any of the claims 1 to 5, wherein the mercury absorbing/adsorbing means is chosen from a group selected from active carbon,
20 aluminum oxide, zeolithes, amalgam forming compounds, monolithic catalysts and mixtures thereof.
7. Lighting device according to any of the claims 1 to 6, wherein the at least one mercury absorbing/adsorbing and/or blocking means is capable of fixing $\geq 20\%$ of
25 the mercury contained in the burner.
8. Lighting device according to any of the claims 1 to 7, wherein the at least

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one mercury absorbing/adsorbing and/or blocking means is capable of fixing the mercury contained in the burner in ≤ 2 seconds, more preferably ≤ 1 second, yet more preferably $\leq 0,5$ seconds and most preferred between ≥ 0 and $\leq 0,05$ seconds.

- 5 9. Lighting device according to any of the claims 1 to 8, wherein the at least one mercury absorbing/adsorbing and/or blocking means comprises a mercury absorbing/adsorbing means and a mercury blocking means, which are provided in such a way that mercury that will leave the burner after an explosion of the lamp will pass both the mercury absorbing/adsorbing means and the mercury blocking means before leaving the
- 10 lighting device.

10. A system comprising a lighting device according to one of the claims 1 to 9, the system being a
- shop lighting system and/or,
 - 15 - home lighting system and/or,
 - head lamp system and/or
 - accent lighting system and/or,
 - spot lighting system and/or,
 - theater lighting system and/or,
 - 20 - consumer TV application system and/or,
 - fiber-optics application system, and/or
 - image projection system.